

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-2 (cancelled)

Claims 3-7 (withdrawn)

1           **Claim 8** (currently amended): A method for reducing  
2           frictional resistance of a ship body by ejecting gas  
3           bubbles on a ~~submerged~~ surface of a the ship body submerged  
4           in water by creating in the water a negative pressure  
5           region, having a pressure lower than a pressure in a  
6           gaseous space, resulting from the ship body cruising  
7           through a body of the water, and directing a gas from the  
8           gaseous space to the negative pressure region in the water  
9           and forming a water flow of water at the negative pressure  
10          region having locally severe vortices, wherein the gas in  
11          the gaseous space is substantially at atmospheric pressure.

1           **Claim 9** (currently amended): A friction reducing ship,  
2           that reduces frictional resistance by ejecting gas bubbles  
3           on a submerged surface of a ship body, comprising:  
4           a negative pressure forming section for creating a  
5           negative pressure region in water having a lower pressure

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relative to a gaseous space;

a fluid guiding passage for directing a gas from the  
gaseous space to the negative pressure region;

and a detaching promotion section for forming a water  
flow at the negative pressure region having locally severe  
vortices,

wherein the gas in the gaseous space is substantially  
at atmospheric pressure.

**Claim 10** (currently amended): A friction reducing ship  
according to claim 9, wherein the negative pressure forming  
section is comprised by a wing protruding into the water  
from ~~a~~ the submerged surface of the ship body; struts for  
supporting the wing; a flow guiding body disposed on a ship  
side of the wing.

**Claim 11** (currently amended): A friction reducing ship  
according to claim 10, wherein the detaching promotion  
section is comprised by the ~~said formed~~ wing on a side of  
the ship body so as to have a -shape, and the flow guiding  
body formed so as to follow a shape of the wing.

**Claims 12-13 (withdrawn)**

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Sub B1  
Claim 14 (currently amended): A friction reducing

ship, that reduces frictional resistance by ejecting gas

bubbles on a submerged surface of a ship body, comprising:

a negative pressure forming section protruding from  
the submerged surface for creating a negative pressure  
region in a water relative to a gaseous space;

a detaching promotion section for forming a water flow  
at the negative pressure region having locally severe  
vortices;

a discharge opening disposed in a rear of the negative  
pressure forming section for ejecting gas bubbles towards  
the negative pressure region in the water;

a fluid passage having one end open to the gaseous  
space and having other end open in the water by way of the  
discharge opening so as to direct a gas from the gaseous  
space into the water; and

a gas supply apparatus for supplying the gas towards  
the negative pressure region,

wherein the gas in the gaseous space is substantially  
at atmospheric pressure.

Claim 15 (currently amended): A method for reducing  
frictional resistance by ejecting gas bubbles on a  
submerged surface of a ship body by creating in a water a

4 negative pressure region, having a pressure lower than the  
5 pressure in a gaseous space, forming a water flow at the  
6 negative pressure region having locally severe vortices,  
7 resulting from the ship body cruising through a body of the  
8 water, and directing a gas from the gaseous space to the  
9 negative pressure region in the water so as to eject the  
10 gas bubbles into the body of the water, and supplying the  
11 gas to the negative pressure region by using a specific  
12 apparatus, wherein the gas in the gaseous space is  
13 substantially at atmospheric pressure.

1 **Claim 16** (currently amended): A method for reducing  
2 frictional resistance by ejecting gas bubbles on a  
3 submerged surface of a ship body by creating in a water a  
4 negative pressure region, having a pressure lower than the  
5 pressure in a gaseous space, resulting from the ship body  
6 cruising through a body of the water, forming a water flow  
7 at the negative pressure region having locally severe  
8 vortices, and directing a gas from the gaseous space to the  
9 negative pressure region in the water, and generating a  
10 circulating flow of the water by using a wing to expand the  
11 negative pressure region, wherein the gas in the gaseous  
12 space is substantially at atmospheric pressure.

1 **Claim 17** (currently amended): A friction reducing

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2 ship, that reduces frictional resistance by ejecting gas  
3 bubbles on a submerged surface of a ship body, comprising:  
4 a negative pressure forming section protruding from  
5 the submerged surface for creating a negative pressure  
6 region in a water relative to a gaseous space;  
7 a detaching promotion section for forming a water flow  
8 at the negative pressure region having locally severe  
9 vortices;  
10 a discharge opening disposed in a rear of the negative  
11 pressure forming section for ejecting the gas bubbles  
12 towards the negative pressure region in the water;  
13 a fluid passage having one end open to the gaseous  
14 space and having other end open in the water by way of the  
15 discharge opening so as to direct a gas from the gaseous  
16 space into the water; wherein  
17 the negative pressure forming section is provided with  
18 a wing shaped component whose cross sectional shape is  
19 formed in a wing shape; and  
20 the gas in the gaseous space is substantially at  
21 atmospheric pressure.

1 **Claim 18** (original): A friction reducing ship  
2 according to claim 17, wherein the wing shaped component is  
3 disposed so as to generate an uplifting force.

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Reply to Office action of January 21, 2003

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Claims 19-21 (withdrawn)

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